

# FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

## Genotyping Report

Date: 3 March 2010

FMDV type A

Country: Vietnam

Period: 2008-2009

No. of isolates: 15

BATCH: WRLFMD/2010/00007



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# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/2/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 9/08 R1B1	
Location: Quang Tri, Vietnam	Topotype: ASIA
Date collected: 01/01/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT08-02.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/3/2008	VIT08-03	636	635	0	99.84	0.16	ASIA	unnamed
2	A/VIT/8/2008	VIT08-08	636	635	0	99.84	0.16	ASIA	unnamed
3	A/VN/02/2009* (GQ406248)	VIT09-AA	636	635	0	99.84	0.16	ASIA	unnamed
4	A/VN/03/2009* (GQ406249)	VIT09-AB	636	635	0	99.84	0.16	ASIA	unnamed
5	A/TAI/10/2008	TAI08-10	636	634	0	99.69	0.31	ASIA	unnamed
6	A/TAI/15/2008	TAI08-15	636	634	0	99.69	0.31	ASIA	unnamed
7	A/TAI/4/2008	TAI08-04	636	634	0	99.69	0.31	ASIA	unnamed
8	A/TAI/9/2008	TAI08-09	636	634	0	99.69	0.31	ASIA	unnamed
9	A/VIT/1/2009	VIT09-01	636	634	0	99.69	0.31	ASIA	unnamed
10	A/VIT/3/2009	VIT09-03	636	634	0	99.69	0.31	ASIA	unnamed
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	564	0	88.68	11.32	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	523	0	82.62	17.38	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	524	0	82.39	17.61	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	514	0	81.20	18.80	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	515	1	81.10	18.90	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/3/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 10/08 R1B1	
Location: Thanh Hoa, Vietnam	Topotype: ASIA
Date collected: 01/01/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT08-03.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/8/2008	VIT08-08	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VN/02/2009* (GQ406248)	VIT09-AA	636	636	0	100.00	0.00	ASIA	unnamed
3	A/VN/03/2009* (GQ406249)	VIT09-AB	636	636	0	100.00	0.00	ASIA	unnamed
4	A/TAI/10/2008	TAI08-10	636	635	0	99.84	0.16	ASIA	unnamed
5	A/TAI/15/2008	TAI08-15	636	635	0	99.84	0.16	ASIA	unnamed
6	A/TAI/4/2008	TAI08-04	636	635	0	99.84	0.16	ASIA	unnamed
7	A/TAI/9/2008	TAI08-09	636	635	0	99.84	0.16	ASIA	unnamed
8	A/VIT/1/2009	VIT09-01	636	635	0	99.84	0.16	ASIA	unnamed
9	A/VIT/2/2008	VIT08-02	636	635	0	99.84	0.16	ASIA	unnamed
10	A/VIT/3/2009	VIT09-03	636	635	0	99.84	0.16	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	565	0	88.84	11.16	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	524	0	82.78	17.22	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	525	0	82.55	17.45	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	520	0	81.76	18.24	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	518	0	81.45	18.55	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	518	0	81.45	18.55	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	515	0	81.36	18.64	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	516	1	81.26	18.74	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/4/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 12/08 R1B1	
Location: Nghe An, Vietnam	Topotype: ASIA
Date collected: 01/01/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT08-04.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Buffalo	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/8/2009	VIT09-08	636	635	0	99.84	0.16	ASIA	unnamed
2	A/VIT/2/2009	VIT09-02	636	634	0	99.69	0.31	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	633	0	99.53	0.47	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	633	0	99.53	0.47	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	633	0	99.53	0.47	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	633	0	99.53	0.47	ASIA	unnamed
7	A/HuBWH/CHA/2009	CHA09-AA	636	632	0	99.37	0.63	ASIA	unnamed
8	A/TAI/10/2008	TAI08-10	636	632	0	99.37	0.63	ASIA	unnamed
9	A/TAI/15/2008	TAI08-15	636	632	0	99.37	0.63	ASIA	unnamed
10	A/TAI/4/2008	TAI08-04	636	632	0	99.37	0.63	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	562	0	88.36	11.64	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	521	0	82.31	17.69	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	522	0	82.08	17.92	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/96 (EF208771)	IRN96-01	635	515	1	81.10	18.90	ASIA	Iran-96
6	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA (G-VI)	unnamed
7	A/IRN/1/2005 (EF208769)	IRN05-01	636	515	0	80.97	19.03	ASIA	Iran-05
8	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	515	0	80.97	19.03	ASIA	A15
9	A/AFG/6/2007	AFG07-06	636	514	0	80.82	19.18	ASIA	Iran-05 <sup>AFG-07</sup>
10	A/BAR/6/2008	BAR08-06	636	514	0	80.82	19.18	ASIA	Iran-05 <sup>BAR-08</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/5/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 15/08 R1 B1	
Location: Thai Binh, Vietnam	Topotype: ASIA
Date collected: 01/01/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT08-05.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/3/2008	VIT08-03	636	632	0	99.37	0.63	ASIA	unnamed
2	A/VIT/8/2008	VIT08-08	636	632	0	99.37	0.63	ASIA	unnamed
3	A/VN/02/2009* (GQ406248)	VIT09-AA	636	632	0	99.37	0.63	ASIA	unnamed
4	A/VN/03/2009* (GQ406249)	VIT09-AB	636	632	0	99.37	0.63	ASIA	unnamed
5	A/TAI/10/2008	TAI08-10	636	631	0	99.21	0.79	ASIA	unnamed
6	A/TAI/15/2008	TAI08-15	636	631	0	99.21	0.79	ASIA	unnamed
7	A/TAI/4/2008	TAI08-04	636	631	0	99.21	0.79	ASIA	unnamed
8	A/TAI/9/2008	TAI08-09	636	631	0	99.21	0.79	ASIA	unnamed
9	A/VIT/1/2009	VIT09-01	636	631	0	99.21	0.79	ASIA	unnamed
10	A/VIT/2/2008	VIT08-02	636	631	0	99.21	0.79	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	561	0	88.21	11.79	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	521	0	82.31	17.69	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	521	0	81.92	18.08	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/AFG/6/2007	AFG07-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>AFG-07</sup>
6	A/BAR/6/2008	BAR08-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>BAR-08</sup>
7	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
8	A/IRN/1/96 (EF208771)	IRN96-01	635	516	1	81.26	18.74	ASIA	Iran-96
9	A/IRN/1/2005 (EF208769)	IRN05-01	636	516	0	81.13	18.87	ASIA	Iran-05
10	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA (G-VI)	unnamed

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/6/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 19/08 R1B1	
Location: Nghe An, Vietnam	Topotype: ASIA
Date collected: 01/01/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT08-06.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/3/2008	VIT08-03	636	634	0	99.69	0.31	ASIA	unnamed
2	A/VIT/8/2008	VIT08-08	636	634	0	99.69	0.31	ASIA	unnamed
3	A/VN/02/2009* (GQ406248)	VIT09-AA	636	634	0	99.69	0.31	ASIA	unnamed
4	A/VN/03/2009* (GQ406249)	VIT09-AB	636	634	0	99.69	0.31	ASIA	unnamed
5	A/TAI/10/2008	TAI08-10	636	633	0	99.53	0.47	ASIA	unnamed
6	A/TAI/15/2008	TAI08-15	636	633	0	99.53	0.47	ASIA	unnamed
7	A/TAI/4/2008	TAI08-04	636	633	0	99.53	0.47	ASIA	unnamed
8	A/TAI/9/2008	TAI08-09	636	633	0	99.53	0.47	ASIA	unnamed
9	A/VIT/1/2009	VIT09-01	636	633	0	99.53	0.47	ASIA	unnamed
10	A/VIT/2/2008	VIT08-02	636	633	0	99.53	0.47	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	563	0	88.52	11.48	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	522	0	82.46	17.54	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	523	0	82.23	17.77	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
6	A/AFG/6/2007	AFG07-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>AFG-07</sup>
7	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
8	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	516	0	81.13	18.87	ASIA	A15
9	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA (G-VI)	unnamed
10	A/IRN/1/96 (EF208771)	IRN96-01	635	514	1	80.94	19.06	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: VIT/7/2008 Batch No: WRLFMD/2010/00007 Sender Ref: VIT 21/08 R1B1 Location: Nghe An, Vietnam Date collected: 01/01/2008 Date received by WRLFMD: 05/02/2010 Date received for sequencing: 24/02/2010 Species: Buffalo Material used: LK1 BHK1 BTy1 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 03/03/2010 Reported by: N.J. Knowles Checked by: D.P. King  Topotype: ASIA Genotype/strain: Unnamed Sequence filename: VIT08-07.SEQ Date sequence last updated: 02/03/2010 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 1254 Min. no. of nt for comparison: 300 Total turn-around time: 26 days Sequencing time: 7 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/3/2008	VIT08-03	636	635	0	99.84	0.16	ASIA	unnamed
2	A/VIT/8/2008	VIT08-08	636	635	0	99.84	0.16	ASIA	unnamed
3	A/VN/02/2009* (GQ406248)	VIT09-AA	636	635	0	99.84	0.16	ASIA	unnamed
4	A/VN/03/2009* (GQ406249)	VIT09-AB	636	635	0	99.84	0.16	ASIA	unnamed
5	A/TAI/10/2008	TAI08-10	636	634	0	99.69	0.31	ASIA	unnamed
6	A/TAI/15/2008	TAI08-15	636	634	0	99.69	0.31	ASIA	unnamed
7	A/TAI/4/2008	TAI08-04	636	634	0	99.69	0.31	ASIA	unnamed
8	A/TAI/9/2008	TAI08-09	636	634	0	99.69	0.31	ASIA	unnamed
9	A/VIT/1/2009	VIT09-01	636	634	0	99.69	0.31	ASIA	unnamed
10	A/VIT/2/2008	VIT08-02	636	634	0	99.69	0.31	ASIA	unnamed
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	566	0	88.99	11.01	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	525	0	82.94	17.06	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	524	0	82.39	17.61	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	521	0	81.92	18.08	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	519	0	81.60	18.40	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	519	0	81.60	18.40	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	516	0	81.52	18.48	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	517	1	81.42	18.58	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/8/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 25/08 R1B1	
Location: Nghe An, Vietnam	Topotype: ASIA
Date collected: 01/01/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT08-08.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/3/2008	VIT08-03	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VN/02/2009* (GQ406248)	VIT09-AA	636	636	0	100.00	0.00	ASIA	unnamed
3	A/VN/03/2009* (GQ406249)	VIT09-AB	636	636	0	100.00	0.00	ASIA	unnamed
4	A/TAI/10/2008	TAI08-10	636	635	0	99.84	0.16	ASIA	unnamed
5	A/TAI/15/2008	TAI08-15	636	635	0	99.84	0.16	ASIA	unnamed
6	A/TAI/4/2008	TAI08-04	636	635	0	99.84	0.16	ASIA	unnamed
7	A/TAI/9/2008	TAI08-09	636	635	0	99.84	0.16	ASIA	unnamed
8	A/VIT/1/2009	VIT09-01	636	635	0	99.84	0.16	ASIA	unnamed
9	A/VIT/2/2008	VIT08-02	636	635	0	99.84	0.16	ASIA	unnamed
10	A/VIT/3/2009	VIT09-03	636	635	0	99.84	0.16	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	565	0	88.84	11.16	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	524	0	82.78	17.22	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	525	0	82.55	17.45	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	520	0	81.76	18.24	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	518	0	81.45	18.55	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	518	0	81.45	18.55	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	515	0	81.36	18.64	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	516	1	81.26	18.74	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/1/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 2/09 R1B1	
Location: Thua Thien Hue, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-01.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VN/09/2009* (GQ406247)	VIT09-AC	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VIT/3/2008	VIT08-03	636	635	0	99.84	0.16	ASIA	unnamed
3	A/VIT/8/2008	VIT08-08	636	635	0	99.84	0.16	ASIA	unnamed
4	A/VN/02/2009* (GQ406248)	VIT09-AA	636	635	0	99.84	0.16	ASIA	unnamed
5	A/VN/03/2009* (GQ406249)	VIT09-AB	636	635	0	99.84	0.16	ASIA	unnamed
6	A/TAI/10/2008	TAI08-10	636	634	0	99.69	0.31	ASIA	unnamed
7	A/TAI/15/2008	TAI08-15	636	634	0	99.69	0.31	ASIA	unnamed
8	A/TAI/4/2008	TAI08-04	636	634	0	99.69	0.31	ASIA	unnamed
9	A/TAI/9/2008	TAI08-09	636	634	0	99.69	0.31	ASIA	unnamed
10	A/VIT/2/2008	VIT08-02	636	634	0	99.69	0.31	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	564	0	88.68	11.32	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	525	0	82.94	17.06	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	524	0	82.39	17.61	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	514	0	81.20	18.80	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
10	A12/UK/119/32 (M10975)	UKG32119	636	516	0	81.13	18.87	EURO-SA	A12

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: VIT/2/2009 Batch No: WRLFMD/2010/00007 Sender Ref: VIT 4/09 R1B1 Location: Hoa Binh, Vietnam Date collected: 01/01/2009 Date received by WRLFMD: 05/02/2010 Date received for sequencing: 24/02/2010 Species: Buffalo Material used: LK1 BHK1 BTy1 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 03/03/2010 Reported by: N.J. Knowles Checked by: D.P. King  Topotype: ASIA Genotype/strain: Unnamed Sequence filename: VIT09-02.SEQ Date sequence last updated: 02/03/2010 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 1254 Min. no. of nt for comparison: 300 Total turn-around time: 26 days Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/8/2009	VIT09-08	636	635	0	99.84	0.16	ASIA	unnamed
2	A/VIT/4/2008	VIT08-04	636	634	0	99.69	0.31	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	633	0	99.53	0.47	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	633	0	99.53	0.47	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	633	0	99.53	0.47	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	633	0	99.53	0.47	ASIA	unnamed
7	A/HuBWH/CHA/2009	CHA09-AA	636	632	0	99.37	0.63	ASIA	unnamed
8	A/TAI/10/2008	TAI08-10	636	632	0	99.37	0.63	ASIA	unnamed
9	A/TAI/15/2008	TAI08-15	636	632	0	99.37	0.63	ASIA	unnamed
10	A/TAI/4/2008	TAI08-04	636	632	0	99.37	0.63	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	562	0	88.36	11.64	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	521	0	82.31	17.69	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	522	0	82.08	17.92	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	515	0	80.97	19.03	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	515	0	80.97	19.03	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	512	0	80.88	19.12	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	514	0	80.82	19.18	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	514	0	80.82	19.18	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	513	1	80.79	19.21	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/3/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 7/09 R1B1	
Location: Quang Binh, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-03.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/4/2009	VIT09-04	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VN/11/2009* (GQ406250)	VIT09-AD	636	636	0	100.00	0.00	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	635	0	99.84	0.16	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	635	0	99.84	0.16	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	635	0	99.84	0.16	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	635	0	99.84	0.16	ASIA	unnamed
7	A/TAI/10/2008	TAI08-10	636	634	0	99.69	0.31	ASIA	unnamed
8	A/TAI/15/2008	TAI08-15	636	634	0	99.69	0.31	ASIA	unnamed
9	A/TAI/4/2008	TAI08-04	636	634	0	99.69	0.31	ASIA	unnamed
10	A/TAI/9/2008	TAI08-09	636	634	0	99.69	0.31	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	564	0	88.68	11.32	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	523	0	82.62	17.38	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	524	0	82.39	17.61	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	514	0	81.20	18.80	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	515	1	81.10	18.90	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/4/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 9/09 R1B1	
Location: Quang Binh, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-04.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Cattle	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/3/2009	VIT09-03	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VN/11/2009* (GQ406250)	VIT09-AD	636	636	0	100.00	0.00	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	635	0	99.84	0.16	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	635	0	99.84	0.16	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	635	0	99.84	0.16	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	635	0	99.84	0.16	ASIA	unnamed
7	A/TAI/10/2008	TAI08-10	636	634	0	99.69	0.31	ASIA	unnamed
8	A/TAI/15/2008	TAI08-15	636	634	0	99.69	0.31	ASIA	unnamed
9	A/TAI/4/2008	TAI08-04	636	634	0	99.69	0.31	ASIA	unnamed
10	A/TAI/9/2008	TAI08-09	636	634	0	99.69	0.31	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	564	0	88.68	11.32	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	523	0	82.62	17.38	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	524	0	82.39	17.61	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	514	0	81.20	18.80	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	515	1	81.10	18.90	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/5/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 11/09 R1B1	
Location: Bac Kan, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-05.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Buffalo	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/7/2009	VIT09-07	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VN/20/2009* (GQ406252)	VIT09-AF	636	636	0	100.00	0.00	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	633	0	99.53	0.47	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	633	0	99.53	0.47	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	633	0	99.53	0.47	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	633	0	99.53	0.47	ASIA	unnamed
7	A/TAI/10/2008	TAI08-10	636	632	0	99.37	0.63	ASIA	unnamed
8	A/TAI/15/2008	TAI08-15	636	632	0	99.37	0.63	ASIA	unnamed
9	A/TAI/4/2008	TAI08-04	636	632	0	99.37	0.63	ASIA	unnamed
10	A/TAI/9/2008	TAI08-09	636	632	0	99.37	0.63	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	564	0	88.68	11.32	ASIA	unnamed
2	A22/IRQ/64 (AY593763)	IRQ64--A	636	526	0	82.70	17.30	ASIA	A22
3	A/IRN/2/87 (EF208770)	IRN87-02	633	523	0	82.62	17.38	ASIA	Iran-87
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/AFG/6/2007	AFG07-06	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>AFG-07</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
7	A/IRN/1/96 (EF208771)	IRN96-01	635	516	1	81.26	18.74	ASIA	Iran-96
8	A/GHA/16/73	GHA73-16	633	514	0	81.20	18.80	AFRICA (G-VI)	unnamed
9	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/TUR/1/2008	TUR08-01	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>ARD-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/6/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 14/09 R1B1	
Location: Phutho, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-06.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Pig	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VN/16/2009* (GQ406251)	VIT09-AE	636	635	0	99.84	0.16	ASIA	unnamed
2	A/VIT/3/2008	VIT08-03	636	630	0	99.06	0.94	ASIA	unnamed
3	A/VIT/8/2008	VIT08-08	636	630	0	99.06	0.94	ASIA	unnamed
4	A/VN/02/2009* (GQ406248)	VIT09-AA	636	630	0	99.06	0.94	ASIA	unnamed
5	A/VN/03/2009* (GQ406249)	VIT09-AB	636	630	0	99.06	0.94	ASIA	unnamed
6	A/TAI/10/2008	TAI08-10	636	629	0	98.90	1.10	ASIA	unnamed
7	A/TAI/15/2008	TAI08-15	636	629	0	98.90	1.10	ASIA	unnamed
8	A/TAI/4/2008	TAI08-04	636	629	0	98.90	1.10	ASIA	unnamed
9	A/TAI/9/2008	TAI08-09	636	629	0	98.90	1.10	ASIA	unnamed
10	A/VIT/1/2009	VIT09-01	636	629	0	98.90	1.10	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	561	0	88.21	11.79	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	521	0	82.31	17.69	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	522	0	82.08	17.92	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	514	0	80.82	19.18	ASIA	Iran-05
6	A/NGR/2/73	NGR73-02	636	514	0	80.82	19.18	AFRICA (G-V)	unnamed
7	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	514	0	80.82	19.18	ASIA	A15
8	A/IRN/1/96 (EF208771)	IRN96-01	635	513	1	80.79	19.21	ASIA	Iran-96
9	A/GHA/16/73	GHA73-16	633	511	0	80.73	19.27	AFRICA (G-VI)	unnamed
10	A/IRN/22/99 (EF208772)	IRN99-22	633	511	0	80.73	19.27	ASIA	Iran-99

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/7/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 16/09 R1B1	
Location: Bac Kan, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-07.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Buffalo	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/5/2009	VIT09-05	636	636	0	100.00	0.00	ASIA	unnamed
2	A/VN/20/2009* (GQ406252)	VIT09-AF	636	636	0	100.00	0.00	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	633	0	99.53	0.47	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	633	0	99.53	0.47	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	633	0	99.53	0.47	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	633	0	99.53	0.47	ASIA	unnamed
7	A/TAI/10/2008	TAI08-10	636	632	0	99.37	0.63	ASIA	unnamed
8	A/TAI/15/2008	TAI08-15	636	632	0	99.37	0.63	ASIA	unnamed
9	A/TAI/4/2008	TAI08-04	636	632	0	99.37	0.63	ASIA	unnamed
10	A/TAI/9/2008	TAI08-09	636	632	0	99.37	0.63	ASIA	unnamed
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	564	0	88.68	11.32	ASIA	unnamed
2	A22/IRQ/64 (AY593763)	IRQ64--A	636	526	0	82.70	17.30	ASIA	A22
3	A/IRN/2/87 (EF208770)	IRN87-02	633	523	0	82.62	17.38	ASIA	Iran-87
4	A/TUR/33/2008	TUR08-33	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/AFG/6/2007	AFG07-06	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>AFG-07</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	636	517	0	81.29	18.71	ASIA	Iran-05
7	A/IRN/1/96 (EF208771)	IRN96-01	635	516	1	81.26	18.74	ASIA	Iran-96
8	A/GHA/16/73	GHA73-16	633	514	0	81.20	18.80	AFRICA (G-VI)	unnamed
9	A/BAR/6/2008	BAR08-06	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/TUR/1/2008	TUR08-01	636	516	0	81.13	18.87	ASIA	Iran-05 <sup>ARD-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 03/03/2010
WRLFMD Ref No: VIT/8/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00007	Checked by: D.P. King
Sender Ref: VIT 19/09 R1B1	
Location: San La, Vietnam	Topotype: ASIA
Date collected: 01/01/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 05/02/2010	Sequence filename: VIT09-08.SEQ
Date received for sequencing: 24/02/2010	Date sequence last updated: 02/03/2010
Species: Buffalo	No. of Nt determined: 636
Material used: LK1 BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1254
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 26 days
	Sequencing time: 7 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/VIT/2/2009	VIT09-02	636	635	0	99.84	0.16	ASIA	unnamed
2	A/VIT/4/2008	VIT08-04	636	635	0	99.84	0.16	ASIA	unnamed
3	A/VIT/3/2008	VIT08-03	636	634	0	99.69	0.31	ASIA	unnamed
4	A/VIT/8/2008	VIT08-08	636	634	0	99.69	0.31	ASIA	unnamed
5	A/VN/02/2009* (GQ406248)	VIT09-AA	636	634	0	99.69	0.31	ASIA	unnamed
6	A/VN/03/2009* (GQ406249)	VIT09-AB	636	634	0	99.69	0.31	ASIA	unnamed
7	A/HuBWH/CHA/2009	CHA09-AA	636	633	0	99.53	0.47	ASIA	unnamed
8	A/TAI/10/2008	TAI08-10	636	633	0	99.53	0.47	ASIA	unnamed
9	A/TAI/15/2008	TAI08-15	636	633	0	99.53	0.47	ASIA	unnamed
10	A/TAI/4/2008	TAI08-04	636	633	0	99.53	0.47	ASIA	unnamed
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/118/87* (EF208777)	TAI87-AD	636	563	0	88.52	11.48	ASIA	unnamed
2	A/IRN/2/87 (EF208770)	IRN87-02	633	522	0	82.46	17.54	ASIA	Iran-87
3	A22/IRQ/64 (AY593763)	IRQ64--A	636	523	0	82.23	17.77	ASIA	A22
4	A/TUR/33/2008	TUR08-33	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>EZM-07</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	636	516	0	81.13	18.87	ASIA	Iran-05
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	516	0	81.13	18.87	ASIA	A15
7	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA (G-VI)	unnamed
8	A/AFG/6/2007	AFG07-06	636	515	0	80.97	19.03	ASIA	Iran-05 <sup>AFG-07</sup>
9	A/BAR/6/2008	BAR08-06	636	515	0	80.97	19.03	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	514	1	80.94	19.06	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

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# Report on FMDV A in Vietnam in 2008-2009

Batch: WRLFMD/2010/00007

Software: MEGA 4.0

No. of Taxa : 173

Data File : n:\evd\meg\db\fmvd\la\SEA2010a.meg

Data Title : Southeast Asia 2008-2009

Data Type : Nucleotide (Coding)

Analysis : Phylogeny reconstruction

Tree Inference : =====

->Method : Neighbor-Joining

->Phylogeny Test and options : Bootstrap (1000 replicates; seed=24054)

Include Sites : =====

->Gaps/Missing Data : Pairwise Deletion

->Codon Positions : 1st+2nd+3rd+Noncoding

Substitution Model : =====

->Model : Nucleotide: Kimura 2-parameter

->Substitutions to Include : d: Transitions + Transversions

->Pattern among Lineages : Same (Homogeneous)

->Rates among sites : Uniform rates

No. of Sites : 642

No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

\*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & F. Hamid, 03 March 2010

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